

from Table 2, or light and heavy chain variable sequences having at least 70%, 80%, 90% or 95% identity to clone-paired sequences from Table 2. The antibody fragment may be a recombinant scFv (single chain fragment variable) antibody, Fab fragment, F(ab')₂ fragment, or Fv fragment. The antibody may be a chimeric antibody or a bispecific antibody. The antibody may be an IgG, or a recombinant IgG antibody or antibody fragment comprising an Fc portion mutated to alter (eliminate or enhance) FcR interactions, to increase half-life and/or increase therapeutic efficacy, such as a LALA, LALA PG, N297, GASD/ALIE, DHS, YTE or LS mutation or glycan modified to alter (eliminate or enhance) FcR interactions such as enzymatic or chemical addition or removal of glycans or expression in a cell line engineered with a defined glycosylating pattern. The antibody or antibody fragment may bind to a SARS-CoV-2 antigen such as a surface spike protein. The antibody or antibody fragment may be administered prior to infection or after infection. The subject may be of age 60 or older, may be immunocompromised, or may suffer from a respiratory and/or cardiovascular disorder. Delivering may comprise antibody or antibody fragment administration, or genetic delivery with an RNA or DNA sequence or vector encoding the antibody or antibody fragment.

[0010] In yet another embodiment, there is provided a monoclonal antibody, wherein the antibody or antibody fragment is characterized by clone-paired heavy and light chain CDR sequences from Tables 3 and 4, respectively. The antibody or antibody fragment may be encoded by light and heavy chain variable sequences having at least 70%, 80%, 90% or 95% identity to clone-paired variable sequences as set forth in Table 1, or by light and heavy chain variable sequences having 100% identity to clone-paired sequences as set forth in Table 1. The antibody or antibody fragment may comprise light and heavy chain variable sequences according to clone-paired sequences from Table 2, or light and heavy chain variable sequences having at least 70%, 80%, 90% or 95% identity to clone-paired sequences from Table 2. The antibody fragment may be a recombinant scFv (single chain fragment variable) antibody, Fab fragment, F(ab')₂ fragment, or Fv fragment. The antibody may be a chimeric antibody, is bispecific antibody, or is an intrabody. The antibody may be an IgG, or a recombinant IgG antibody or antibody fragment comprising an Fc portion mutated to alter (eliminate or enhance) FcR interactions, to increase half-life and/or increase therapeutic efficacy, such as a LALA, LALA PG, N297, GASD/ALIE, DHS, YTE or LS mutation or glycan modified to alter (eliminate or enhance) FcR interactions such as enzymatic or chemical addition or removal of glycans or expression in a cell line engineered with a defined glycosylating pattern. The antibody or antibody fragment may bind to a SARS-CoV-2 surface spike protein.

[0011] A hybridoma or engineered cell encoding an antibody or antibody fragment wherein the antibody or antibody fragment is characterized by clone-paired heavy and light chain CDR sequences from Tables 3 and 4, respectively. The antibody or antibody fragment may be encoded by light and heavy chain variable sequences having at least 70%, 80%, 90% or 95% identity to clone-paired variable sequences as set forth in Table 1, or by light and heavy chain variable sequences having 100% identity to clone-paired sequences as set forth in Table 1. The antibody or antibody fragment may comprise light and heavy chain variable sequences

according to clone-paired sequences from Table 2, or light and heavy chain variable sequences having at least 70%, 80%, 90% or 95% identity to clone-paired sequences from Table 2. The antibody fragment may be a recombinant scFv (single chain fragment variable) antibody, Fab fragment, F(ab')₂ fragment, or Fv fragment. The antibody may be a chimeric antibody, a bispecific antibody, or an intrabody. The antibody may be an IgG, or a recombinant IgG antibody or antibody fragment comprising an Fc portion mutated to alter (eliminate or enhance) FcR interactions, to increase half-life and/or increase therapeutic efficacy, such as a LALA, LALA PG, N297, GASD/ALIE, DHS, YTE or LS mutation or glycan modified to alter (eliminate or enhance) FcR interactions such as enzymatic or chemical addition or removal of glycans or expression in a cell line engineered with a defined glycosylating pattern. The antibody or antibody fragment may bind to a SARS-CoV-2 surface spike protein.

[0012] In still yet another embodiment, there is provided a vaccine formulation comprising one or more antibodies or antibody fragments characterized by clone-paired heavy and light chain CDR sequences from Tables 3 and 4, respectively. The at least one of said antibodies or antibody fragments may be encoded by light and heavy chain variable sequences according to clone-paired sequences from Table 1, by light and heavy chain variable sequences having at least 70%, 80%, or 90% identity to clone-paired sequences from Table 1, or by light and heavy chain variable sequences having at least 95% identity to clone-paired sequences from Table 1. The at least one of said antibodies or antibody fragments may comprise light and heavy chain variable sequences according to clone-paired sequences from Table 2, or may comprise light and heavy chain variable sequences having at least 70%, 80%, 90% or 95% identity to clone-paired sequences from Table 2. The at least one of said antibody fragments is a recombinant scFv (single chain fragment variable) antibody, Fab fragment, F(ab')₂ fragment, or Fv fragment. The at least one of said antibodies may be a chimeric antibody, a bispecific antibody or an intrabody. The antibody may be an IgG, or a recombinant IgG antibody or antibody fragment comprising an Fc portion mutated to alter (eliminate or enhance) FcR interactions, to increase half-life and/or increase therapeutic efficacy, such as a LALA, LALA PG, N297, GASD/ALIE, DHS, YTE or LS mutation or glycan modified to alter (eliminate or enhance) FcR interactions such as enzymatic or chemical addition or removal of glycans or expression in a cell line engineered with a defined glycosylating pattern. The antibody or antibody fragment may bind to a SARS-CoV-2 antigen surface spike protein.

[0013] In a further embodiment, there is provided a vaccine formulation comprising one or more expression vectors encoding a first antibody or antibody fragment as described herein. The expression vector(s) may be Sindbis virus or VEE vector(s). The vaccine may be formulated for delivery by needle injection, jet injection, or electroporation. The vaccine formulation may further comprise one or more expression vectors encoding for a second antibody or antibody fragment, such as a distinct antibody or antibody fragment of claims 26-34.

[0014] In yet a further embodiment, there is provided a method of protecting the health of a subject of age 60 or older, an immunocompromised, subject or a subject suffering from a respiratory and/or cardiovascular disorder that is